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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,503	09/10/2003	Akihiko Ito	S004-5101	3602
7590 05/31/2005			EXAMINER	
ADAMS & WILKS			TRAN, HUAN HUU	
31st Floor			ART UNIT	
50 Broadway			PAPER NUMBER	
New York, NY 10004			2861	

DATE MAILED: 05/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/659,503

Applicant(s)

ITO ET AL.

Examiner

Huan H. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on preliminary amendment filed on 08/09/04.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 03/11/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Japan on 09/25/2002. It is noted, however, that applicant has not filed a certified copy of the foreign priority application as required by 35 U.S.C. 119(b).

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 5-10, 11, 12, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahira (JP 04-140175) discussed on page 2 of the specification in view of Ogawa (JP 03-190773 cited in the IDS filed on 03/11/04).

As to claim 5-11, Takahira discloses a thermal printer comprising:

a thermal head (not label but is clearly shown in Fig.2) having a heating element;

a platen roller (4) urged against the thermal head;

driving means for driving the heating element to print on a printing paper (not shown but is inherent);

a paper feeding mechanism for feeding the printing paper in a paper feeding direction by rotating the platen roller with the printing paper () sandwiched between the thermal head and the platen roller (motor 11 for driving the platen roller 4 shown in Fig.1 );

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a movable mechanism (support body 5, rotating shaft 6) for supporting one of the thermal head and the platen roller so as to be movable in a predetermined direction; and

biasing means (spring 13) for generating a pressing force at a pressing portion between the thermal head and the platen roller;

a frame 1 for supporting the thermal head, the platen roller, the movable mechanism and the biasing means (claim 10)

Takahira does not teach or suggest the limitation “wherein the predetermined direction and the biasing direction are perpendicular to the paper feeding direction at the pressing portion” (claim 5) , the limitation “wherein the movable mechanism comprises a rotating mechanism that rotatably supports the thermal head about a rotating support shaft, the rotating support shaft being arranged along a plane formed by the paper feeding direction at the pressing portion” (claim 6) , the limitation “wherein the biasing means comprises a spring that presses the thermal head toward the platen roller, a pressing direction of the spring being perpendicular to the paper feeding direction at the pressing portion” (claim 7), the limitation “wherein a center of an acting point of the spring is located on a plane which passes through the pressing portion between the thermal head and the platen roller and which is perpendicular to the paper feeding direction at the pressing portion.” (claim 8) by providing the head supporting body rotating shaft along a straight line that connects the center of the rotating support shaft with the pressing portion between the thermal head and the platen roller (see the explanation given in the first full paragraph on page 10 of the specification ) and by pressing the head against the platen roller in a direction perpendicular to the head surface of the thermal head.

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Ogawa teaches the missing limitations in that the head rotating shaft (fulcrum 5) is positioned on the tangent line of the recording line to the platen roller (1) , i.e. along a straight line that connects the center of the rotating support shaft with the pressing portion between the thermal head and the platen roller, and that the head (2) is pushed against the platen roller by biasing means (spring 7) in a direction perpendicular to the head surface of the thermal head.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Ogawa and Takahira to make the biasing force of the thermal head uniform and to prevent the increase of the torque of a platen roller.

As to claim 11, the limitation regarding the printing paper is noted but is not given patentable weight since it has been held that material or article worked upon does not limit apparatus claims. MPEP 2115 . See Ex parte Thibault, 164 USPQ 666, 667, (Bd. App. 1969) ("Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim. "); In re Young, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 136 USPQ 458, 459 (CCPA 1963) ("Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims. ")).

Similarly, as to claims 12 and 13, Takahira discloses a printer comprising: a print head for performing printing; a roller (4) urged against the print head for feeding printing paper sandwiched therebetween in a paper feeding direction; a movable mechanism (head support 5) for supporting one of the print head and the roller so as to be movable in a predetermined

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direction; and biasing means for producing a pressing force at a pressing portion between the print head and the roller;

Takahira does not teach the limitation “wherein predetermined direction and the biasing direction are perpendicular to the paper feeding direction at the pressing portion to thereby reduce a force applied to the paper in a direction opposite to that of the paper feeding direction.” and the limitation “wherein the movable mechanism comprises a rotating mechanism that rotatably supports the print head about a rotatable support shaft, the rotatable support shaft being arranged along a plane formed by the paper feeding direction at the pressing portion”.

Ogawa teaches the missing limitations in that the head rotating shaft (fulcrum 5) is positioned on the tangent line of the recording line to the platen roller (1) , i.e. along a straight line that connects the center of the rotating support shaft with the pressing portion between the thermal head and the platen roller, and that the head (2) is pushed against the platen roller by biasing means (spring 7) in a direction perpendicular to the head surface of the thermal head.

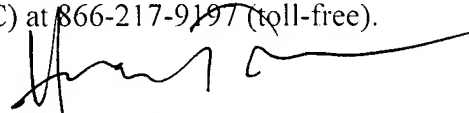
Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Ogawa and Takahira to make the biasing force of the thermal head uniform and to prevent the increase of the torque of a platen roller.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huan H. Tran whose telephone number is (571) 272-2261. The examiner can normally be reached on at work on W-F from 6:30 to 5; T are telework days.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Talbott can be reached on (571) 272-1934. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Huan H. Tran  
Primary Examiner  
Art Unit 2861

hht  
05/26/2005